

Listing of Claims

1. (Currently Amended) A method for detecting for the presence of a tracer gas in an environmental enclosure, the method comprising:

inducing air surrounding the enclosure to flow through a ventilation system and a gas filter positioned in the ventilation system into the enclosure to establish positive pressure in the enclosure;

filtering a tracer gas from the air flowing through the gas filter, the tracer gas comprising a gas naturally present in the air surrounding the enclosure, the tracer gas comprising one of carbon dioxide, nitrogen, oxygen, or argon; and

detecting for the presence of the tracer gas inside the enclosure.

2. (Canceled)

3. (Original) The method of claim 2, wherein the filter comprises a filter housing and soda lime contained in the housing for absorbing carbon dioxide from the air flowing through the filter.

4. (Original) The method of claim 1, wherein the filter is capable of filtering all of the tracer gas flowing through the filter.

5. (Original) The method of claim 1, wherein:
the tracer gas comprises carbon dioxide; and
the filter is capable of filtering all of the carbon dioxide from the air flowing through the filter.

6. (Original) The method of claim 1, wherein the enclosure comprises an operator cab.

7. (Currently Amended) A method for detecting for the presence of a tracer gas in an environmental enclosure, the method comprising:

inducing air surrounding the enclosure to flow through a ventilation system and a gas filter positioned in the ventilation system into the enclosure to establish positive pressure in the enclosure;

filtering a tracer gas from the air flowing through the gas filter, the tracer gas comprising a gas naturally present in the air surrounding the enclosure;

detecting for the presence of the tracer gas inside the enclosure; and

~~The method of claim 1, further comprising:~~

determining the expected concentration of tracer gas inside the enclosure due to losses through the filter;

measuring the lowest achievable concentration of tracer gas inside the enclosure;

detecting for the presence of leaks in the ventilation system by comparing the lowest achievable concentration of tracer gas inside the enclosure to the expected concentration of tracer gas inside the enclosure due to losses through the filter.

8. (Currently Amended) A method for detecting for the presence of a tracer gas in an environmental enclosure, the method comprising:

inducing air surrounding the enclosure to flow through a ventilation system and a gas filter positioned in the ventilation system into the enclosure to establish positive pressure in the enclosure;

filtering a tracer gas from the air flowing through the gas filter, the tracer gas comprising a gas naturally present in the air surrounding the enclosure;

detecting for the presence of the tracer gas inside the enclosure; and

~~The method of claim 1, further comprising:~~

calculating the time required for the concentration of the tracer gas inside the enclosure to reduce to a predetermined level at a predetermined leakage; and

measuring the actual time required for the concentration of the tracer gas inside the enclosure to reduce to the predetermined level to determine whether the leakage of the ventilation system is less than the predetermined leakage.

9-11. (Canceled)

12. (Currently Amended) A method for leak testing a ventilation system, the method comprising:

inducing air outside of an enclosure to flow through the ventilation system and a gas filter positioned in the ventilation system into the enclosure so as to establish positive pressure inside the enclosure, wherein the filter filters a tracer gas from the air flowing through the filter, the tracer gas comprising a gas naturally present in the air surrounding the enclosure, wherein the tracer gas comprises carbon dioxide;

measuring the concentration of tracer gas inside the enclosure; and

detecting for the presence of leaks in the ventilation system from the concentration of the tracer gas inside the enclosure.

13. (Canceled)

14. (Original) The method of claim ~~13~~ 12, wherein the filter comprises soda lime for filtering carbon dioxide from the air flowing through the filter.

15. (Canceled)

16. (Currently Amended) The method of claim 12, wherein:

~~the tracer gas comprises carbon dioxide; and~~

the filter is capable of filtering all of the carbon dioxide from the air flowing through the filter.

17. (Currently Amended) A method for leak testing a ventilation system, the method comprising:

inducing air outside of an enclosure to flow through the ventilation system and a gas filter positioned in the ventilation system into the enclosure so as to establish positive pressure inside the enclosure, wherein the filter filters a tracer gas from the air flowing through the filter, the tracer gas comprising a gas naturally present in the air surrounding the enclosure;

measuring the concentration of tracer gas inside the enclosure;

detecting for the presence of leaks in the ventilation system from the concentration of the tracer gas inside the enclosure; and

~~The method of claim 12, comprising:~~

determining the expected concentration of tracer gas inside the enclosure due to losses through the filter; and

comparing the measured concentration of tracer gas inside the enclosure to the expected concentration of tracer gas inside the enclosure due to losses through the filter to determine whether there are any leaks in the ventilation system.

18. (Currently Amended) A system for detecting for the presence of a tracer gas in an environmental enclosure used in a polluted atmosphere, the system comprising:

a gas filter configured to fit in a ventilation system directing ambient air to flow through the filter into the enclosure, the filter being capable of filtering a tracer gas from ambient air flowing through the filter, the tracer gas comprising a gas naturally present in the air surrounding the enclosure; and

a gas detector positioned downstream of the gas filter for detecting the presence of the tracer gas inside the enclosure;

wherein the gas filter is one of a carbon dioxide filter for removing carbon dioxide from the air flowing into the enclosure, a nitrogen filter for removing nitrogen from the air flowing into the enclosure, an oxygen filter for removing oxygen from the air flowing into the enclosure, or an argon filter for removing argon from the air flowing into the enclosure.

19. (Canceled)

20. (Currently Amended) The system of claim ~~19~~ 18, wherein the gas filter comprises a carbon dioxide filter ~~is~~ capable of removing all of the carbon dioxide from the air flowing through the filter.

21. (Currently Amended) The system of claim ~~19~~ 18, wherein the filter comprises soda lime for absorbing carbon dioxide from the air flowing through the filter.

22. (Original) The system of claim 21, wherein the filter comprises a first and second electrostatic filter elements, with the soda lime interposed between the electrostatic filter elements.

23. (Original) The system of claim 18, wherein the enclosure is an operator cab of a vehicle.

24-26. (Canceled)